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THE USEFULNESS OF STUNTING.
By Edward P. Warner.

Monoral Aeronautical
Laboratory

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Stunt flying in airplanes has often been condemned, and much of the condemnation has been just. The use of aircraft in war, together with the competition in the production of reckless thrillers in which certain former service pilots engaged after returning to civil life, had given to acrobatic flying a bad requiation. The bill to regulate the operations of aircraft which has recently become a law in wassachusetts prescribes certain limitations on stunting, and a number of state officials and others interested in aerial law but not directly connected with flying protested when the bill was first introduced that it did not go far enough, that stunt flying should be not merely regulated but definitely prohibited.

A great deal of this criticism is based on a misunderstanding of the nature of stunt flying, and, in particular, on an congerated idea of the danger involved. When carried out with a proper airplane and by a skilled pilot, stunting need not be more dangerous than the following of a straight course. This statement, however, should be qualified by adding that it applicantly only to that sort of stunting which is approved in the Governme. Service, and which consists merely of causing the airplane to follow an abnormal course and to execute such maneuvers as loops, spins, and rolls. It does not in any sense relate to such foolhardy and useless performances as the attempt to transfer a passenger from one airplane to another or from an aircraft to a speeding automobile, or to giving "wing-walking" exhibitions, in which Taken from the Christian Science Monitor, October 16, 1932.

an airplane in flight is used as a trapeze for the accomplishment of athletic feats which should be done at a low altitude and ove a net. The use of airplanes for such purposes as that, whether before a crowd or for the moving pictures, should be absolutely prohibited.

Stunt flying should be permitted only in airplanes especial: designed and approved for that service, and only at a considerable altitude. There is neither necessity nor justification for the looping of large flying boats. The pilots who start loops directly off the ground or who delay recovery from a spin until they are below the tree-tops are courting accident, and sooner or later they find it. Fifteen hundred feet is quite low enough for ordinary acrobatics, and 800 is an absolute minimum which should never be passed.

Stunt flying should also be totally divorced from the commer cial operation of airplanes. There is nothing in common between air transport and violent maneuvering and the attempt to combine them is a direct handicap to safe-and-sane air travel. The commercial airplane ordinarily is not strong enough to withstand the loads entailed by acrobatics, and to raise the structural strengt to that point would require such increase in weight and the sacrifice of so much useful load that the commercial efficiency would be too low to permit of operation at reasonable cost a passenger mile. Quite aside from this technical point, however, there is further good reason to discourage stunting in connection with commercial operation. It is uncomfortable to almost all of those who

indulge in it for the first time, and the passenger who has been through a series of loops and spins nearly always lands with the feeling that he has had a very thrilling experience which will make an interesting story, but which he would not care to repeat. Since nothing is less desirable than that any sensationalism should appear or that the adjective "thrilling" should be applied in connection with commercial flying, it is best to discourage stunting altogether so far as passenger-carrying work is concerned. and the new Massachusetts law expressly forbids any acrobatics while flying with paying passengers. Very commendable action in the same direction has been taken by the management of the aviation meet to be held in Hartford next month. The events there have been planned primarily to facilitate the demonstration of the commercial possibilities of aircraft, and in pursuance of that praiseworthy intention all stunting over or near the field has been forbidden under penalty of forfeiture of the entry fee and of all prizes won by the offending pilot.

When everything has been said regarding the undesirability of introducing stunting into the operations of an aerial common carrier and the necessity of enforcing stringent regulations in the interest of safety, there still remains a distinct field of usefulness for acrobatic flying, as well as a field in which, while it may do no good, there still is no reason for prohibition. The first is that of military flying, the second that of sport. Stunting is an important part of the training of a military pilot, and the knowledge gained in passing through the "acrobatic course"

planes. The maneuvers of air combat differ in no particular fror those stunts which are practiced in times of peace. It is, there fore, important that pilots at present in military service, and also those who hold reserve commissions or who are flying private ly and would be available for the military aeronautical establish ment in time of emergency, should be free to stunt to their heart' content, subject only to regulations necessary for the public safe ty. From the points of view of both military and sporting use, i' must be remembered that many pilots, originally trained during the war, find their chief pleasure in stunting, and that flying would have little attraction for them as a sport if they were restricted to straight cross-country work.

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